

Appl. No. 10/511,195
Reply to Office Action of: October 11, 2006

Attorney Docket No. 11138-016

I. Listing of the Claims

1. (Currently Amended) A device for the plastic shaping of pipe ends comprising a shaping unit actuated by a first fluid pressure, a prestressing unit arranged on a common longitudinal axis with the shaping unit and actuated by a second fluid pressure, a clamping element of conical design which can be clamped by the prestressing unit, at least a first and a second separate pressure space being provided in the shaping unit and in the prestressing unit respectively, ~~which wherein~~ the first and the second pressure spaces lack fluid communication therebetween such that the pressure spaces can be pressurized independently of each other, and ~~wherein~~ the shaping unit and the prestressing unit are designed as constructional independent units which are mechanically interconnected but the first and second pressure spaces ~~being are~~ are completely separate in relation to one another.

2. (Previously Presented) The device as claimed in claim 1 wherein the shaping unit and the prestressing unit are closed off in relation to one another by at least one wall running transversely to the longitudinal axis.

3. (Currently Amended) The device as claimed in claim 1 wherein the first and the second pressure spaces have a full-area, ~~preferably~~ circular shape in the cross section running transversely to the longitudinal axis.

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4. (Previously Presented) The device as claimed in claim 1 wherein the shaping unit is formed by a first cylinder and by a first piston movable axially therein, the first piston being acted upon by the first fluid pressure.

5. (Previously Presented) The device as claimed in claim 4 wherein the prestressing unit is formed by a second cylinder and by a second piston movable axially therein being actuated upon by the second fluid pressure.

6. (Currently Amended) The device as claimed in claim 5 wherein the first cylinder of the shaping unit includes a first rigid connection to is connected rigidly to form a first main assembly including one of the second cylinder or the second piston of the prestressing unit, and to form a first main assembly with a yoke plate arranged transversely to the longitudinal axis.

7. (Previously Presented) The device as claimed in claim 6 wherein an opening for interaction with the clamping elements, which is arranged coaxially with the longitudinal axis and tapers conically away from the shaping unit is located in the yoke plate.

8. (Previously Presented) The device as claimed in claim 6 wherein the rigid connection between the first cylinder of the shaping unit and the yoke plate is formed by one or more first tie rods.

9. (Currently Amended) The device as claimed in claim 6 wherein one of the second piston of the prestressing unit, or the second cylinder of the

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prestressing unit includes a second rigid connection ~~is connected rigidly~~ to an adapter plate to form a second main assembly with a driver plate~~[[.]]~~ arranged transversely to the longitudinal axis, and to a receiving plate~~[[.]]~~ arranged transversely to the longitudinal axis.

10. (Currently Amended) The device as claimed in claim 9 wherein the first rigid connection between the first cylinder and the second cylinder or the second piston of the prestressing unit and the driver plate and the receiving plate ~~(9)~~ is formed by one or more second tie rods.

11. (Currently Amended) The device as claimed ~~[[in]]~~ in claim 9 wherein the first piston of the shaping unit, the first main assembly ~~including one of a second piston of the prestressing unit or a second cylinder of the prestressing unit and connected to an adapter plate~~, and ~~[[a]]~~ the second main assembly are displaceable relative to one another parallel to the longitudinal axis.

12. (Currently Amended) The device as claimed in claim 11 wherein the first main assembly or the second main assembly is arranged in a stationary manner~~[[.]]~~ and connected ~~in a fixed manner~~ to a fixed frame.

13. (Previously Presented) The device as claimed in claim 4 wherein a free end of a piston rod of the first piston has first attachment means for detachable attachment of an upsetting head.

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14. (Previously Presented) The device as claimed in claim 9 wherein the receiving plate for the clamping elements has second attachment means for detachable attachment of the clamping elements.

15. (Currently Amended) The device as claimed in claim 1 wherein an upsetting head, ~~on~~ which on one side has a recess is designed as the counter for a pipe contour to be formed and on the opposite side a connection means, ~~such as a T-groove,~~ for the shaping unit is provided.

16. (Previously Presented) The device as claimed in claim 1 wherein the clamping elements are formed by clamping jaws which consist of a plurality of segments arranged in a ring-shaped manner and each having an outer surface of conical shape, which are guided by means of one or more pins and held in an open position in an unloaded state by means of one or more compression springs.

17. (Previously Presented) The device as claimed in claim 4 wherein in the operating state, the first fluid pressure is greater than the second fluid pressure.

18. (Previously Presented) The device as claimed in claim 1 wherein the first cylinder is a double acting cylinder acted upon on the opposite sides thereof by the first fluid pressure in the first pressure space and by a third fluid pressure acting in a third pressure space.

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19. (New): The device as claimed in claim 15 wherein the connection means includes a T-groove.

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